

Facility Information Summary	
AER Reporting Year	2014
Licence Register Number	W0146-02
Name of site	Knockharley Landfill
Site Location	Knockharley, Navan, Co. Meath
NACE Code	3821
Class/Classes of Activity	11.1, 11.5
National Grid Reference (6E, 6 N)	297532 E, 267363 N

A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year **and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.**

Knockharley Landfill is an operational landfill facility. It has seen a decrease in waste acceptance from 2013 to 2014. Air emissions are compliant with the licence limits. There are no discharges to water or sewer. There was no exceedance of the limit of 35 mg/ of suspended solids, or of the 20 mg/l site trigger value for TOC on storm water discharging from the storm water pond in 2014. Noise monitoring determined that there were no noise emissions from landfilling activities above the licence limit. There was one exceedance of the dust limit, but it was due to algal growth in the pot and was not site related.

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

<u>Heathwoodmont.</u>	<u>01/04/15</u>
Signature Group/Facility manager <small>(or nominated, suitably qualified and experienced deputy)</small>	Date

		Additional information	
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you <u>only</u> need to complete table W1 and or W2 for storm water analysis and visual inspections	<input type="checkbox"/>	There are 8 surface water monitoring points at the facility. All of the data for monitoring of the downstream locations is hidden in the rows of Table W1. It is assumed that only data for SW9, the outlet from the storm water pond is required here.
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising <u>only any evidence of contamination noted during visual inspections</u>	<input type="checkbox"/>	

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Comments
SW9	onsite		Temperature	2014			11.45	degrees C	yes	NAC
SW9	onsite		pH (lab)	2014			8.31	pH units	yes	5.5-8.5
SW9	onsite		Electrical Conductivity	2014			590.5	µS/cm @20oC	yes	1000
SW9	onsite		Ammoniacal Nitrogen	2014			0.22	mg/L	yes	0.23
SW9	onsite		Dissolved Oxygen	2014			8.925	mg/L	yes	NAC
SW9	onsite		Chloride	2014			15	mg/L	yes	250
SW9	onsite		Total Suspended Solids	2014	35		6.75	mg/L	yes	
SW9	onsite		BOD	2014			<2	mg/L	yes	5
SW9	onsite		COD	2014			12.25	mg/L	yes	40
SW9	onsite		TOC	2014	20		1.775	mg/L	yes	continuous monitoring of stormwater outlet

*trigger values may be agreed by the Agency outside of licence conditions

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
			SELECT		
			SELECT		

Licensed Emissions to water and /or wastewater(sewer)-periodic monitoring (non-continuous)

3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below	<input type="checkbox"/>	
4	guidance and checklists for Quality of Aqueous Monitoring Lab Quality results checklist	<input type="checkbox"/>	Additional information

Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: W0146-02 Year 2014

Emission reference no:	Emission released to	Parameter/ Substance Note 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference	Annual mass load (kg)	Comments

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

Continuous monitoring

5 Does your site carry out continuous emissions to water/sewer monitoring? Additional Information

If yes please summarise your continuous monitoring data below in Table W4 and compare it to

6 Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

7 Do you have a proactive service contract for each piece of continuous monitoring equipment on

8 Did abatement system bypass occur during the reporting year? If yes please complete table W5

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
	SELECT	SELECT		SELECT	SELECT	SELECT					
	SELECT	SELECT		SELECT	SELECT	SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

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Answer all questions and complete all tables where relevant

- 1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licensed emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

Additional information	
Yes	

Periodic/Non-Continuous Monitoring

- 2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below

No	
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- 3 Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? [Basic air monitoring checklist](#) [AGN2](#)

Yes	
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Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
Flare 1	Carbon monoxide (CO)	annual	50		6.43	mg/m ³	Yes	HCIR by Horiba PG-250	4.02	
Flare 1	Nitrogen oxides (NOx/NO2)	annual	150		91.59	mg/m ³	Yes	Chemiluminescence	57	
Flare 1	Volatile organic compounds (as TOC)	annual	10		4.93	mg/m ³	Yes	FID	3.09	
Flare 1	Chlorine and inorganic compounds (as HCl)	annual	50		0.12	mg/m ³	Yes	Ion chromatography	0.08	
Flare 1	Fluorine and inorganic compounds (as HF)	annual	5		0.15	mg/m ³	Yes	Ion chromatography	0.09	
Flare 1	Sulphur oxides (SOx/SO2)	annual	500		327.45	mg/m ³	Yes	NDIR Adsorption	205	
KHO2 engine	Total Particulates	annual	130		2.39	mg/m ³	Yes	Gravimetric	13.94	
KHO2 engine	Carbon monoxide (CO)	annual	1400		633.17	mg/m ³	Yes	HCIR by Horiba PG-250	3387.42	
KHO2 engine	Nitrogen oxides (NOx/NO2)	annual	500		227.73	mg/m ³	Yes	Chemiluminescence	1219.75	
KHO2 engine	Chlorine and inorganic compounds (as HCl)	annual	50	at mass flows >0.3 kg/h	0.76	mg/m ³	Yes	Ion chromatography	4.18	
KHO2 engine	Fluorine and inorganic compounds (as HF)	annual	5	at mass flows >0.05 kg/h	1.27	mg/m ³	Yes	Ion chromatography	6.97	
KHO2 engine	TA Luft organic substances class 1	annual	20	at mass flows > 0.1 kg/h	<0.56	mg/m ³	Yes	Thermal Desorption	0.00	
KHO2 engine	Sulphur oxides (SOx/SO2)	annual			624.21	mg/m ³		NDIR Adsorption	3345.60	
KHO3 engine	Total Particulates	annual	130		1.87	mg/m ³	Yes	Gravimetric	7.52	
KHO3 engine	Carbon monoxide (CO)	annual	1400		636.08	mg/m ³	Yes	HCIR by Horiba PG-250	3796.09	

AIR-summary template		Lic No: W0146-02		Year 2014					
KH03 engine	Nitrogen oxides (NOx/NO2)	annual	500	244.03	mg/m ³	Yes	Chemiluminescence	1458.30	
KH03 engine	Chlorine and inorganic compounds (as HCl)	annual	50	at mass flows >0.3 kg/h	0.48	mg/m ³	Yes	Ion chromatography	3.01
KH03 engine	Fluorine and inorganic compounds (as HF)	annual	5	at mass flows >0.05 kg/h	0.59	mg/m ³	Yes	Ion chromatography	0.00
KH03 engine	TA Luft organic substances class 1	annual	20	at mass flows > 0.1 kg/h	<0.47	mg/m ³	Yes	Thermal Desorption	0.00
KH03 engine	Sulphur oxides (SOx/SO2)	annual			636.3	mg/m ³		NDIR Adsorption	3796.09
KH04 engine	Total Particulates	annual	130		2.01	mg/m ³	Yes	Gravimetric	14.93
KH04 engine	Carbon monoxide (CO)	annual	1400		629.63	mg/m ³	Yes	HCIR by Horiba PG-250	3806.64
KH04 engine	Nitrogen oxides (NOx/NO2)	annual	500		269.17	mg/m ³	Yes	Chemiluminescence	1627.15
KH04 engine	Chlorine and inorganic compounds (as HCl)	annual	50	at mass flows >0.3 kg/h	0.08	mg/m ³	Yes	Ion chromatography	0.75
KH04 engine	Fluorine and inorganic compounds (as HF)	annual	5	at mass flows >0.05 kg/h	0.07	mg/m ³	Yes	Ion chromatography	0.00
KH04 engine	TA Luft organic substances class 1	annual	20	at mass flows > 0.1 kg/h	<0.39	mg/m ³	Yes	Thermal Desorption	0.00
KH04 engine	Sulphur oxides (SOx/SO2)	annual			631.06	mg/m ³		NDIR Adsorption	3814.10
KH02 engine	Volumetric Flow	annual	3000		768	m ³ /hr	Yes	Pitot	
KH03 engine	Volumetric Flow	annual	3000		794	m ³ /hr	Yes	Pitot	
KH04 engine	Volumetric Flow	annual	3000		810	m ³ /hr	Yes	Pitot	

Note 1: Volumetric flow shall be included as a reportable parameter

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Continuous Monitoring		

<p>4 Does your site carry out continuous air emissions monitoring? If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)</p>	Yes	
<p>5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below</p>	No	
<p>6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?</p>	Yes	
<p>7 Did your site experience any abatement system bypasses? If yes please detail them in table A3 below</p>	No	

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
Flare 1	Carbon monoxide	500	Annual	SELECT	mg/m3	6.43		0	0	
KH02	Carbon monoxide	1400	Annual		mg/m3	633.17		0	0	
KH03	Carbon monoxide	1400	Annual		mg/m3	636.08		0	0	
KH04	Carbon monoxide	1400	Annual		mg/m3	629.63		0	0	
	SELECT				SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table [Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

AIR-summary template		Lic No: W0146-02	Year: 2014									
Solvent use and management on site												
8	Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5		SELECT									
Table A4: Solvent Management Plan Summary		Solvent regulations Please refer to linked solvent regulations to complete table 5 and 6										
Total VOC Emission limit value												
Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Total VOC emissions as %of solvent input</th> <th style="width: 10%;">Total Emission Limit Value (ELV) in licence or any revision thereof</th> <th style="width: 80%;">Compliance</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> <td style="text-align: center;">SELECT</td> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td style="text-align: center;">SELECT</td> </tr> </tbody> </table>	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision thereof	Compliance			SELECT			SELECT
Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision thereof	Compliance										
		SELECT										
		SELECT										
Table A5: Solvent Mass Balance summary												
	(I) Inputs (kg)	(O) Outputs (kg)										
Solvent	(I) Inputs (kg)	Organic solvent emission in waste	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g.	Solvents destroyed onsite through	Total emission of Solvent to air (kg)				
							Total					

Bund testing

dropdown menu click to see options

Additional information

Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed the integrity test-all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

- 1
 - 2 Please provide integrity testing frequency period
 - 3 Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
 - 4 How many bunds are on site?
 - 5 How many of these bunds have been tested within the required test schedule?
 - 6 How many mobile bunds are on site?
 - 7 Are the mobile bunds included in the bund test schedule?
 - 8 How many of these mobile bunds have been tested within the required test schedule?
 - 9 How many sumps on site are included in the integrity test schedule?
 - 10 How many of these sumps are integrity tested within the test schedule?
- Please list any sump integrity failures in table B1**
- 11 Do all sumps and chambers have high level liquid alarms?
 - 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
 - 13 Is the Fire Water Retention Pond included in your integrity test programme?

Yes	
3 years	
Yes	
6	
6	
4	
Yes	
4	
0	
0	
N/A	
SELECT	
N/A	

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
Bund : Mobile Bund	prefabricated	PE bund located inside oil storage	oil	1m3	1.1 m3	Other (please specify)	visual assessment and partial hydrostatic test	14 & 15/07/14	Yes	Pass	n/a	n/a	no	
Bund B3 : Mobile Bund	prefabricated	PE bund located inside oil storage	oil	1 m3	1.14m3	Hydraulic test	visual assessment and partial hydrostatic test	14 & 15/07/14	Yes	Pass	n/a	n/a	no	
Bund B4: Mobile Bund	prefabricated	PE bund located inside oil storage	oil	0.22m3	0.25m3	Hydraulic test	visual assessment and partial hydrostatic test	14 & 15/07/14	Yes	Pass	n/a	n/a	no	
Bund B2: Mobile Bund	prefabricated	PE bund located inside oil storage	container	0.22m3	0.25 m3	Hydraulic test	visual assessment and partial hydrostatic test	14 & 15/07/14	Yes	Pass	n/a	n/a	no	
Bunded Storage Container	other (please specify)	steel constructed bund within a	hydraulic oils	1.6m3	1.8m3	Hydraulic test	visual assessment and partial hydrostatic test	14 & 15/07/14	Yes	Pass	n/a	n/a	no	
Diesel Bund B1 : Diesel Storage Compound	reinforced concrete		diesel	6 m3	6.6 m3	Hydraulic test	visual assessment and partial hydrostatic test	14, 15 & 16/07/14	Yes	Pass	n/a	n/a	no	

*Capacity required should comply with 25% or 110% containment rule as detailed in your licence.
 Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance? [bundling and storage guidelines](#)

- 15 Are channels/transfer systems to remote containment systems tested?
- 16 Are channels/transfer systems compliant in both integrity and available volume?

Yes	
N/A	
N/A	

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**

- 2 Please provide integrity testing frequency period
- *please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

No	
SELECT	

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT				SELECT

Please use commentary for additional details not answered by tables/ questions above

Groundwater/Soil monitoring template

Lic No:

W0146-02

Year

2014

.+ where average indicates arithmetic mean

.++ maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	IGV	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
2014	MW6D	pH (Field)		Quarterly	7.73	7.575	pH unit	6.5-9.5	IGV	no
	MW6D	Electrical Conductivity(Lab)		Quarterly	514	128.92	µS/cm	1000	IGV	no
	MW6D	Oxygen, dissolved (Field)		Quarterly	3.16	2.06	mg/l	NAC	site GTL	no
	MW6D	Temperature (Field)		Quarterly	15.8	11.68	SELECT	25	site GTL	no
	MW6D	Ammoniacal Nitrogen as N		Quarterly	0.569	0.44325	SELECT	1.96	site GTL	no
	MW6D	Chloride		Quarterly	17.6	14.7	mg/l	31.28	site GTL	no
		Iron			0.91	0.2275				
	MW6D			Quarterly			mg/l	0.2	IGV	yes
	MW6D	Potassium		Quarterly	2.66	2.3	mg/l	6.25	site GTL	no
	MW6D	Sodium		Quarterly	22.9	16.3975	mg/l	112.3	site GTL	no
	MW6D	Total Oxidised Nitrogen		Quarterly	0.23	0.05	mg/l	NAC	site GTL	no
	MW6D	Total Organic carbon		Quarterly	6.14	2.825	mg/l	12.99	site GTL	yes
	MW6D	Phenols		Quarterly	<0.002	<0.002	mg/l	0.02	site GTL	no
	MW6D	Faecal coliforms		Quarterly	13	6	cfu/100ml	0 counts per 100ml	IGV	yes
	MW6D	Total coliforms		Quarterly	48800	12914	cfu/100ml	0 counts per 100ml	IGV	no

upgradient also shows a rise, the rise in downgradient well is very slight over 5 years

well below GTL

not landfill related

*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA.

[Groundwater monitoring template](#)

More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and [Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\)](#) risk assessment tools is available in the EPA published guidance (see the link in G31)

**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)

[Groundwater regulations](#) [Drinking water \(private supply\) standards](#) [Drinking water \(public supply\) standards](#) [Interim Guideline Values \(IGV\)](#)

Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Where additional detail is required please enter it here in 200 words or less

[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

			Commentary
1	ELRA initial agreement status	Required but not submitted	To be forwarded to the Agency in due course.
2	ELRA review status	SELECT	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	
4	Financial Provision for ELRA status	SELECT	
5	Financial Provision for ELRA - amount of cover	Specify	
6	Financial Provision for ELRA - type	SELECT	
7	Financial provision for ELRA expiry date	Enter expiry date	
8	Closure plan initial agreement status	SELECT	
9	Closure plan review status	SELECT	
10	Financial Provision for Closure status	SELECT	
11	Financial Provision for Closure - amount of cover	Specify	
12	Financial Provision for Closure - type	SELECT	
13	Financial provision for Closure expiry date	Enter expiry date	

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	W0146-02	Year	2014
Highlighted cells contain dropdown menu click to view		Additional Information			
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes			
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes			
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes			
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes			

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Air	Bi-annual gas management meetings to review existing infrastructure, discuss maintenance and required upgrades.	100%	Meetings held and documented	Section Head	Increased compliance with licence conditions
Reduction of emissions to Air	Reduce number of fugitive VOC emissions detected during surveys.	100%	Progressive final and intermediate capping, continuous gas extraction.	Section Head	Reduced emissions
Reduction of emissions to Air	All waste filled to final levels during 2013 to have final cap installed within 24 months	100%	Structured capping programme.	Section Head	Increased compliance with licence conditions
Energy Efficiency/Utility conservation	Maintain O2 level at 2.5% or below for optimal running and output of generators.	80%	Regular landfill infrastructure checks and field balancing.	Individual	Reduced emissions
Reduction of emissions to Wastewater	Implement the recirculation of leachate.	50%	Proposal submitted to Agency for recirculation trial. Trial was successful. Plans to progress recirculation in additional areas.	Section Head	Reduced emissions
Reduction of emissions to Wastewater	Reduce the area open to rain infiltration in order to reduce quantity of leachate produced	90%	Progressive final and intermediate capping of landfill cells	Section Head	Reduced emissions

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0146-02	Year	2014
Reduction of emissions to Air	Maintain and continue to improve onsite landscaping and wetland area.	100%	Assessment of plantations, replaced failed trees/plants and improve overall general appearance of the landfill site.	Section Head		Improved Environmental Management Practices	
Additional improvements	Review relationships with neighbours and interested parties on a continual basis. Review communications programme annually.	100%	Assess communications programme annually.	Section Head		Improved Environmental Management Practices	
Reduction of emissions to Air	Review the number and composition of complaints to determine any trends	100%	Monthly assesment of complaints.	Section Head		Less complaints	
Energy Efficiency/Utility conservation	Review the energy usage on site and explore options for reduction	0%	An energy audit will be completed in 2015	Section Head		Reduced emissions	
SELECT		SELECT		SELECT		SELECT	

Noise monitoring summary report Lic No: W0146-02 Year 2014

- 1 Was noise monitoring a licence requirement for the AER period?
- If yes please fill in table N1 noise summary below
- 2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? [Noise Guidance note NG4](#)
- 3 Does your site have a noise reduction plan?
- 4 When was the noise reduction plan last updated?
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is site compliant with noise limits (day/evening/night)?
17/06/2014	15:28-15:58	N1		47	35	43		No	SELECT	No facility emissions audible. Sporadic local road traffic dominant when present. Distant N2 traffic to NE continuously significant in background. Birdsong and aircraft. Crow calls significant.	Yes
17/06/2014	14:53-15:23	N2		55	41	51		No		No emissions audible from facility. N2 road traffic to NE continuously clearly audible and dominating noise environment. Sporadic local road traffic also dominant when present. Birdsong, aircraft and lightly rustling trees.	Yes
17/06/2014	14:02-14:32	N3		41	36	44		No		audible continuously. L90 not entirely representative, as also influenced by continuously audible road traffic in distance to NE. Sporadic road traffic audible at low level on local road to E. Birdsong/calls, aircraft and occasional dog barking audible at dwelling at approx 80m. Strimmer or hedge cutter clearly audible continuously at nearby dwelling 14:15-14:23.	Yes
17/06/2014	16:02-16:32	N4		55	35	59		No		Strimmer or hedge cutter operating almost continuously at nearest dwelling dominant and intrusive until 16:16, masking all other noise apart from sporadic local traffic. From 16:16, strimmer ceased allowing TE operation at landfill site to be faintly audible from time to time. Distant N2 traffic to NE continuously significant in background. Birdsong and aircraft.	

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

**** please explain the reason for not taking action/resolution of noise issues?**

Any additional comments? (less than 200 words)

capital investment
operational changes

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
- 2 Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information
- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

[SEAI - Large Industry Energy Network \(LIEN\)](#)

Additional information

	Sep-10
No	
SELECT	Not applicable

Table R1 Energy usage on site				
Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)				
Total Energy Generated (MWHrs)		20,659		
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	138.662	129.8	-6.4%	
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	92946	59104	-36%	36.41%
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table R2 Water usage on site					Water Emissions	Water Consumption
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr
Groundwater						
Surface water						
Public supply	5475	3361	-62%			
Recycled water						
Total						

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)	33903	7391			26512

Table R4: Energy Audit finding recommendations								
Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
Sep-10			SELECT					
			SELECT					
			SELECT					

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry)please complete the following information

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology					
Primary Fuel					
Thermal Efficiency					
Unit Date of Commission					
Total Starts for year					
Total Running Time					
Total Electricity Generated (GWH)					
House Load (GWH)					
KWH per Litre of Process Water					
KWH per Litre of Total Water used on Site					

Complaints and Incidents summary template

Lic No: W0146-02

Year

2014

Complaints

Additional information

Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below

Yes

Table 1 Complaints summary

Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
07/02/2014	Odour		Received from EPA.Alder received email		Complete	07/02/2014	
07/02/2014	Odour		Received from EPA.Alder received email		Complete	07/02/2014	
19/02/2014	Odour		Received from Voxpro (after hours service). Email received		Complete	21/02/2014	
28/02/2014	Odour		Received from EPA.Alder received email		Complete	03/03/2014	
11/03/2014	Odour		Received from EPA.Alder received email & phone call from EPA		Complete	12/03/2014	
07/05/2014	Odour		Complainant made a phone call to site.		Complete	07/05/2014	
04/09/2014	Odour		Complainant made a phone call to site.		Complete	04/09/2014	
04/09/2014	Odour		Complainant made a phone call to site.		Complete	04/09/2014	
04/09/2014	Odour		Complainant made a phone call to site.		Complete	04/09/2014	
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		9					
Total complaints closed during reporting year		9					
Balance of complaints end of reporting year		0					

Complaints and Incidents summary template

Lic No: W0146-02

Year

2014

Incidents

Additional information

Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below

Yes

*For information on how to report and what constitutes an incident

[What is an incident](#)

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
24/01/2014	Confirmation of waste service provider credentials	Waste Disposal	1. Minor	No Uncontrolled release	Other (add details)	Records required to show Ritta as an approved site to take waste oil from Knockharley	Normal activities	EPA	New	Correspondance located in EPA correspondence file.	None required	Complete	21/02/2014	Low
24/02/2014	Trigger level reached	Leachate lagoon	1. Minor	No Uncontrolled release	Operational controls		Normal activities	EPA	Recurring	Tankering will bring the levels back into compliance before the end of the working day. All pumps switched off.		Complete	24/02/2014	Low
27/03/2014	Spillage	Flow meter housing area	1. Minor	No Uncontrolled release	Operational controls	No stopper/flange placed at end of pipe when recirculation flow meter was removed for examination/testing.	Routine maintenance	EPA	New	Flange/stop end put on the pipe immediately upon discovery.Also mobile bowser has removed this spillage.	Alert contractor to plug the pipe on future examination of the flow meter	Complete	27/03/2014	Low
18/04/2014	Trigger level reached	Gas well I7, and open surfaces within the landfill footprint	1. Minor	Air	Other (add details)	Well I7 was disconnected from landfill gas collection system for access purposes. Cell 9 and Cell12 requires cover with Geohess.	Normal activities	EPA	Recurring	Well I7 was reconnected. Progress on the slopes of Cell 9 has been made preparing the ground for the laying of intermediate cover material Geohess.	The slopes of Cell 12 and Cell 9 are programmed to be covered with geohess weather permitting during the summer period of 2014.	Complete	18/04/2014	Medium
18/06/2014	Breach of ELV	Dust monitoring point D1,D8	1. Minor	Air	Not related to site activities	Algae present in samples from the dust pots	Normal activities	EPA	New	Monitoring to continue as required	n/a	Complete	18/06/2014	Low
06/11/2014	Breach of ELV	Four zones of surface emissions, which exceeded trigger levels.	1. Minor	Air	Operational controls	Along the leading edge of Geohess gas barrier membrane across the flanks of Cell 9 minor leakage is evident.	Normal activities	EPA	Recurring	Increase suction where possible along the edge of Cell9 where Geohess membrane meets the soil	Gas extraction is continually monitored	Ongoing	06/11/2014	Medium
Total number of incidents current year	7													
Total number of incidents previous year	10													
% reduction/increase	-30													

WASTE SUMMARY		Lic No:	W0146-02	Year	2014
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES			PRTR facility login	dropdown list click to see options	

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

Additional Information

1 Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility? (waste generated within your boundaries is to be captured through PRTR reporting)

Yes	
-----	--

If yes please enter details in table 1 below

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

No	
----	--

3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

No	
----	--

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWC code	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%) - only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
	European Waste Catalogue EWC codes		European Waste Catalogue EWC codes								
	EWC 08 03 15	08- WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS,) ADHESIVES, SEALANTS AND PRINTING INKS	Ink sludges other than those mentioned in 08 03 14	0	18			0%	D1-Deposit into or onto land		
	EWC 11 01 10	01-WASTE RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS	Industrial Filter Cake (Non Hazardous)	0	35			0%	D1-Deposit into or onto land		
	EWC 17 01 01	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	concrete	48	0			0%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting asother biological transformation processes)which includes gasification and pyralisis		
	EWC 17 05 04	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Soil and Stone	744	0			0%	D1-Deposit into or onto land		
	EWC 17 05 04	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Soil and Stone	3910	6459.32			0%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting asother biological transformation processes)which includes gasification and pyralisis		
	EWC 19 01 12	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Incinerator Bottom Ash	14816	5,852.84			0%	R4- Recycling/reclamation of metals and metal compounds		
	EWC 19 05 99	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Stabilised Waste - Residual Fraction	0	795			0%	D1-Deposit into or onto land		
	EWC 19 05 99	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Stabilised Waste - Residual Fraction	0	4009.86			0%	R5-Recycling/reclamation or other inorganic materials which includes soil celaning resulting in recovery of the soil and recycling of inorganic construction materials		

WASTE SUMMARY		Lic No:		W0146-02		Year		2014	
EWC 19 08 01	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Screenings from waste water	0	4.8 8435.3			0%	D1-Deposit into or onto land	
EWC 19 09 02	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Filter cake from water treatment	4359	677.26		-48%	0%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting as another biological transformation processes)which includes gasification and pyrolysis	
EWC 19 12 07	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Woodchip	231			-66%	0%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting as another biological transformation processes)which includes gasification and pyrolysis	
EWC 19 12 09	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Minerals-Fines/Stones and Concrete		13089.66			0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials	
EWC 19 12 12	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Residual municipal and commercial waste	3,774	17,787.70		-76%	0%		
EWC 20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD)	Mixed municipal waste	2681	9925.98		-73%		D1-Deposit into or onto land	
EWC 20 03 03	20- MUNICIPAL WASTES (HOUSEHOLD)	street cleaning waste	193	1703		-89%		D1-Deposit into or onto land	
EWC 20 03 07	20- MUNICIPAL WASTES (HOUSEHOLD)	Municipal Bulky Waste	0	348.6				D1-Deposit into or onto land	

SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite

Yes	

5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site

Yes	
Yes	
Yes	
SELECT	

6 Does your facility have relevant nuisance controls in place?

7 Do you have an odour management system in place for your facility? If no why?

8 Do you maintain a sludge register on site?

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m3)	Comments
Municipal solid waste	88,000/175,000	7,391	1,878,342	88,000 tonnes as per planning permission, 175,000 t as per licence

WASTE SUMMARY		Lic No:	W0146-02	Year	2014
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Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										m2	m2		
Cells 1-12	2004	ongoing	Yes	Private	Non Hazardous	2031	No	No	No	94500	94500		0.5 m BES and HDPE geomembrane

WASTE SUMMARY	Lic No: W0146-02	Year: 2014
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Table 4 Environmental monitoring-landfill only Landfill Manual-Monitoring Standards

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments
Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	

→ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					
6000m2	25000m2	55000 m2	21500	55000	Final cap to LD std:gas collection layer, 1 mm fully welded LDPE liner, sub-surface drainage layer, subsoil layer and topsoil layer. Soil thickness of 1 m. Other	

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant?

Yes
No

10 Is leachate released to surface water? If yes please complete leachate mass load information below

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
12,909,784	20,659	19,675 to national grid, 984 used on site	Yes	

[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.18

REFERENCE YEAR	2014
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1. FACILITY IDENTIFICATION

Parent Company Name	Knockharley Landfill Limited
Facility Name	Knockharley Landfill
PRTR Identification Number	W0146
Licence Number	W0146-02

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Knockharley
Address 2	Navan
Address 3	(Includes Townlands of Tuitterath & Flemingstown)
Address 4	
	Meath
Country	Ireland
Coordinates of Location	-6.57373 52.3511
River Basin District	IEEA
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Thomas Finnegan
AER Returns Contact Email Address	tom.finnegan@landfills.ie
AER Returns Contact Position	Assistant Landfill Manager, Knockharley Landfill
AER Returns Contact Telephone Number	041-982 1650
AER Returns Contact Mobile Phone Number	086-8076237
AER Returns Contact Fax Number	041-982 1750
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	7
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(d)	Landfills
5(c)	Installations for the disposal of non-hazardous waste
5(d)	Landfills
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	
--	--

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0146 | Facility Name : Knockharley Landfill | Filename : W0146_2014.xls | Return Year : 2014 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASERS TO AIR		Please enter all quantities in this section in KGs				QUANTITY					
No. Annex II	POLLUTANT Name	M/C/E	METHOD		Flare 1	KH02 engine	KH03 engine	KH04 engine	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4			
02	Carbon monoxide (CO)	M	EN 15058:2004	HICR by Horiba PG-250	4.02	3387.0	3736.0	3807.0	10994.02	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	M	EN 14792:2005	Chemiluminescence	57.0	1220.0	1458.0	1627.0	4362.0	0.0	0.0
11	Sulphur oxides (SOx/SO2)	M	OTH	NDIR Adsorption	205.0	3346.0	3796.0	3814.0	11161.0	0.0	0.0
01	Methane (CH4)	E	OTH	Calculation	0.0	0.0	0.0	0.0	1309290.0	0.0	1309290.0
07	Non-methane volatile organic compounds (NMVOC)	M	ALT	FID	3.09	0.0	0.0	0.0	3.09	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASERS TO AIR		Please enter all quantities in this section in KGs				QUANTITY					
No. Annex II	POLLUTANT Name	M/C/E	METHOD		Flare 1	KH02 engine	KH03 engine	KH04 engine	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4			
80	Chlorine and inorganic compounds (as HCl)	M	EN 1911-1 to 3:2003	Ion Chromatography	0.08	4.18	3.01	0.75	8.02	0.0	0.0
84	Fluorine and inorganic compounds (as HF)	M	ALT	Ion Chromatography	0.09	6.97	0.0	0.0	7.06	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASERS TO AIR		Please enter all quantities in this section in KGs				QUANTITY				
Pollutant No.	POLLUTANT Name	M/C/E	METHOD		KH02 engine	KH03 engine	KH04 engine	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3			
230	TA Luft organic substances class 1	M	ALT	Thermal Desorption	0.0	0.0	0.0	0.0	0.0	0.0
244	Total Particulates	M	ALT	Gravimetric	13.94	7.52	14.93	36.39	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:		Knockharley Landfill			
Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
			Method Code	Designation or Description	
Total estimated methane generation (as per site model)	4841407.0	E	OTH		N/A
Methane flared	67893.0	M	Measured at flare		4500.0 (Total Flaring Capacity)
Methane utilised in engines	3464224.0	M	measured at engines		2400.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	1309290.0	C	calculated		N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR#: W0146 | Facility Name : Knockharley Landfill | Filename : W0146_2014.xls | Return Year : 2014 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		M/C/E	Method Used		QUANTITY			
No. Annex II	Name		Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		M/C/E	Method Used		QUANTITY			
No. Annex II	Name		Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		M/C/E	Method Used		QUANTITY			
Pollutant No.	Name		Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0146 | Facility Name : Knockharley Landfill | Filename : W0146_2014.xls | Return Year

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SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0146 | Facility Name : Knockharley Landfill | Filename : W0146_2014.xls | Return Year : 2014 |

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SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR#: W0146 | Facility Name : Knockharley Landfill | Filename : W0146_2014.xls | Return Year : 2014 |

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Please enter all quantities on this sheet in Tonnes

0

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Non	Non Haz Waste: Address of Recover/Disposer				
Within the Country	19 07 03	No	3594.62 in 19 07 02	landfill leachate other than those mentioned	D9	M	Weighed	Offsite in Ireland	Navan Waste Water Treatment Plant,.,		Navan Waste Water Treatment Plant,.,Navan,County Meath,Ireland			
Within the Country	19 07 03	No	1230.0 in 19 07 02	landfill leachate other than those mentioned	D9	M	Weighed	Offsite in Ireland	Riita,.,		.,Greenogue Business Park,Rathcoole,Dublin,Ireland			
Within the Country	19 07 03	No	19455.29 in 19 07 02	landfill leachate other than those mentioned	D9	M	Weighed	Offsite in Ireland	EPS Ltd. WWTP,.,		Louth,.,Ireland			
Within the Country	19 07 03	No	896.86 in 19 07 02	landfill leachate other than those mentioned	D9	M	Weighed	Offsite in Ireland	Ringsend Wastewater Treatment Plant,.,		Ringsend,Dublin,.,4,Ireland			

* Select a row by double-clicking the Description of Waste then click the delete button

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)

[Link to Waste Guidance](#)